

Notice of Allowability

Application No.

10/025,595

Applicant(s)

DE GROOT, PETER J.

Examiner

Andrew Hwa S. Lee

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/8/04.
2. ☒ The allowed claim(s) is/are 1-10, 12-38 and 40-70.
3. ☒ The drawings filed on 3/17/04 & 6/4/02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

Remarks

This Notice of Allowability is in response to Applicant's Amendment of 11/22/04. Claims 1-10, 12-38, and 40-70 are pending. Claims 65-70 are new. Claims 1, 4, 29, 53, and 58 have been amended.

The following is an examiner's statement of reasons for allowance:

With regards to **claims 1-10, 12-23, 29-38, 40-55, 65, and 67**, as the Applicant has argued, the prior art of record fails to show or to suggest an interferometry method comprising of all the steps as presently claimed having light reflected from the measurement surface onto a multi-element detector and imaged through an optical system, wherein the optical system comprises a lenslet array and at least one focusing optic positioned along an optical path between the measurement surface and the lenslet array. Dependent claims 2-10, 12-23, 30-38, 40-52, 54, 55, 65, and 67 are allowable by virtue of their dependence on independent claims 1, 29, and 53 respectively.

With regards to **claims 24-28, and 66** the prior art of record fails to show or to suggest an interferometry method comprising of all the steps as presently claimed having the combination of preparing, from a common source, an array of sub-beams; relaying, using at least one focusing element, the plurality of sub-beams to a beam splitter; and directing the measurement beams to contact a measurement surface as an array of focused spot. Dependent claims 25-28 and 66 are allowable by virtue of their dependence on independent claim 24.

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With regards to **claims 56, 57, 69 and 70**, the prior art of record fails to show or to suggest an interferometric system comprising of all the steps and elements as presently claimed wherein the interferometric system forms a virtual image and a numerical aperture converter matches an objective numerical aperture of the lens system to an image numerical aperture of the lens system. Claims 69 and 70 are allowable by virtue of their dependence on independent claims 56 and 57 respectively.

With regards to **claims 58-60**, the prior art of record fails to show or to suggest an interferometry method comprising of all the steps as presently claimed having a combination of preparing, from a common source beam, a plurality of sub-beams and relaying, using an optical system comprising at least one focusing element, a first portion of each sub-beam to a respective, different location of a measurement surface and a second portion of each sub-beam to a respective, different location of a reference surface. Dependent claims 59 and 60 are allowable by virtue of their dependence on independent claim 58.

With regards to **claims 61-62, and 68**, the prior art of record fails to show or to suggest an interferometric system comprising of all the elements as presently claimed having the combination of a lenslet array configured to prepare a plurality of sub-beams with at least one focusing element positioned to relay the plurality of sub-beams from the lenslet array to the beamsplitter. Claims 62 and 68 are allowable by virtue of their dependence on independent claim 61.

With regards to **claims 63 and 64**, the prior art of record fails to show or to suggest an interferometry method comprising of all the steps as presently claimed wherein light reflected from the measurement surface and the light reflected from the reference surface is directed to a

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lenslet array in combination with forming a virtual image from both of the reflected light, the virtual image being spaced apart from the measurement and reference surfaces, and imaging the virtual image onto a detector. Claim 64 is allowable by virtue of its dependence on independent claim 63.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

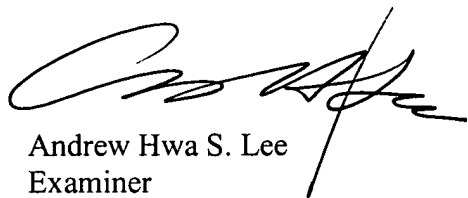
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Andrew Hwa S. Lee', with a long, sweeping horizontal stroke extending to the right.

Andrew Hwa S. Lee

Examiner

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